



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/055,156

04/04/1998

HILLEL GAZIT

0000001

3555

7590

10/19/2004

PILLSBURY WINTHROP LLP
1600 TYSONS BLVD.
MCLEAN, VA 22102

EXAMINER

HOM, SHICK C

ART UNIT

PAPER NUMBER

2666

DATE MAILED: 10/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/055,156

Applicant(s)

GAZIT, HILLEL

Examiner

Shick C Hom

Art Unit

2666

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/14/03 & 7/8/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) See Continuation Sheet is/are pending in the application.
- 4a) Of the above claim(s) See Continuation Sheet is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 25-42,44 and 45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Continuation of Disposition of Claims: Claims pending in the application are 4-19,25-42,44,45,49-53,57-62,65,66,68-71,73,74,76-78,80,81,83,102-111,116,117,119-128,133,134,136-139 and 144-149.

Continuation of Disposition of Claims: Claims withdrawn from consideration are 4-19,49-53,57-62,65,66,68-71,73,74,76-78,80,81,83,102-111,116,117,119-128,133,134,136-139 and 144-149.

Art Unit: 2666

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 7/8/04 have been fully considered but they are not persuasive.

In page 3 line 4 to page 5 line 8, applicant argued that the restriction is not proper because the examiner has already searched the currently pending claims and therefore there is NO BURDEN on the examiner to examine them is not persuasive because the original claims have grown in numbers substantially to claims now covering four distinct inventions, one group being drawn to queuing arrangement classified in class 370, subclass 412, a second group being drawn to synchronizing classified in class 370, subclass 503, a third group being drawn to particular storing and queuing arrangement classified in claim 370, subclass 429, and a forth group being drawn to flow control of data transmission through a network classified in class 370, subclass 235. Due to the large number of claims and the method of entering amendments being changed, it is a further burden to accurately track these amendments. In order to properly focus on the single claimed invention, it is necessary to restrict the inventions at this time. While restriction is normally made

Art Unit: 2666

before any action on the merits, it may be made at any time before final action.

Election/Restrictions

2. This application contains claims drawn to an invention nonelected with traverse in Paper No. 23. A complete reply to the final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Specification

3. The disclosure is objected to because of the following informalities: in page 5 line 1 which recite "data stream will only a limited number" seems to be a typo. Appropriate correction is required.

4. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Art Unit: 2666

Claim Objections

5. Claim 27 is objected to because of the following informalities: in claim 27 line 1 before the words "determining said modified new data" insert ---wherein---, for clarity. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. Claims 25-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 30 lines 2 and 4 which recite steps (d) and (e) is not clear as to where is step c, since only steps (a) and (b) are recited in claim 25; further it is not clear as to whether they're reciting steps (c) and (d), respectively. In claim 25 lines 5-8 which recite the step of forming the modified new data stream timing reference which corresponds with a timing gap for decoding the new data stream is not clear as to where in the specification this step is being supported because in the specification page 30 lines 7-9 merely recite determining the "real-time transmit start point" being the time at which transmission of the new data stream should begin; page 44 lines

Art Unit: 2666

10-11 recite the gap being merely the inter-frame delay; and page 46 lines 7-18 recite the use of the real-time new stream Program Clock References PCR for decoding, no modified new data stream timing reference as claimed is clearly recited in the specification.

Claims 26-29 are rejected under 35 U.S.C. 112, second paragraph because they depend from rejected claim 25.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

8. Claims 31, 34-42 and 44-45 are rejected under 35 U.S.C. 102(e) as being anticipated by Lyons et al. (6,101,195).

Regarding claim 31:

Lyons et al. disclose the method for splicing digitally encoded data streams, including an old data stream and a new data stream (see col. 1 lines 35-48 which recite the method for

Art Unit: 2666

splicing encoded or compressed bit-stream, where the active live camera data or the end of the bit-stream corresponds to the old data stream and the commercials or beginning of the bit-stream corresponds to the new data stream), comprising: (i) determining a splice-out point of the old data stream; (ii) determining a splice-in point of the new data stream (see col. 3 lines 1-26 which recite determining the first transport stream, e.g. camera or remote audio/video feed, and the second transport stream, e.g. video disk which clearly anticipate the old data stream and new data stream); (iii) modifying a current Liming reference of the new data stream to correspond with the splice-out point of the old data stream and the splice-in point of the new data stream, thereby forming a modified new data stream timing reference (see col. 2 lines 16-28 which recite calculating the new timing information using the decoded timing information and information related to the local timing reference and using the calculated timing information for retiming the streams); and (iv) aligning a portion of the new data stream with a portion of the old data stream according to said modified new data stream timing reference, such that a transition from the old data stream to the new data stream, during playback, will be substantially imperceptible (see col. 3 lines 28-40 and col. 3 lines 52-62 which recite the use of the new timing information

Art Unit: 2666

for retiming the old presentation time stamps PTS to accomplish seamless splicing, i.e. transition being imperceptible during playback).

Regarding claim 39:

Lyons et al. disclose the method for splicing digitally encoded data streams, including an old data stream and a new data stream (see col. 1 lines 35-48 which recite the method for splicing encoded or compressed bit-stream, where the active live camera data or the end of the bit-stream corresponds to the old data stream and the commercials or beginning of the bit-stream corresponds to the new data stream), comprising: (i) determining a first source for the old data stream and a second source for the new data stream (see col. 3 lines 1-26 which recite determining the first transport stream, e.g. camera or remote audio/video feed, and the second transport stream, e.g. video disk); (ii) modifying a current timing reference of the new data stream to correspond with a splice-out point of the old data stream and a splice-in point of the new data stream, thereby forming a modified new data stream timing reference (see col. 2 lines 16-28 which recite calculating the new timing information using the decoded timing information and information related to the local timing reference whereby the recited calculated timing information corresponds to the modified new data stream timing

Art Unit: 2666

reference now claimed); and (iii) aligning a portion of the new data stream with a portion of the old data stream according to said modified new data stream timing reference, such that a transition from the old data stream to the new data stream, during playback, will be substantially imperceptible (see col. 2 lines 16-28 which recite using the calculated timing reference to retim the data stream; col. 3 lines 28-40 and col. 3 lines 52-62 which recite the use of the new timing information for retiming the old presentation time stamps PTS to accomplish seamless splicing, i.e. transition being imperceptible during playback).

Regarding claim 42:

Lyons et al. disclose the method for splicing digitally encoded data streams, including an old data stream and a new data stream (see col. 1 lines 35-48 which recite the method for splicing encoded or compressed bit-stream, where the active live camera data or the end of the bit-stream corresponds to the old data stream and the commercials or beginning of the bit-stream corresponds to the new data stream), comprising: (a) modifying a current timing reference of the new data stream to correspond with a splice-out point of the old data stream and a splice-in point of the new data stream, thereby forming a modified new data stream timing reference (see col. 2 lines 16-28 which

Art Unit: 2666

recite calculating the new timing information using the decoded timing information and information related to the local timing reference whereby the recited calculated timing information corresponds to the modified new data stream timing reference now claimed), wherein at least one of said data streams is MPEG encoded (see col. 1 lines 16-34 and col. 8 lines 35-58 which recite the use of MPEG encoding); and (b) aligning a portion of the new data stream with a portion of the old data stream according to said modified new data stream timing reference, such that a transition from the old data stream to the new data stream, during playback, will be substantially imperceptible (see col. 2 lines 16-28 which recite using the calculated timing reference to retime the data stream; col. 3 lines 28-40 and col. 3 lines 52-62 which recite the use of the new timing information for retiming the old presentation time stamps PTS to accomplish seamless splicing, i.e. transition being imperceptible during playback).

Regarding claim 34:

Lyons et al. disclose wherein said data streams include video and audio data, wherein step (iii) includes determining a video splice-out point and an audio splice-out point, and wherein step (iv) includes determining a video splice-in point and an audio splice-in point (In Fig. 2 see the video and audio

Art Unit: 2666

encoder source and col. 3 lines 2-27 which recite the camera and remote audio/video feed, and video disk clearly anticipate the video and audio splice points).

Regarding claim 35:

Lyons et al. disclose wherein said splice-out point of step (i) is determined within a user-selectable portion of the old data stream (see col. 34-47 which recite user selectable splice-in and splice-out point).

Regarding claim 36:

Lyons et al. disclose wherein said splice-in point of step (ii) is determined within a user-selectable portion of the new data stream (see col. 34-47 which recite user selectable splice-in and splice-out point).

Regarding claim 37:

Lyons et al. disclose wherein said splice-out point of step (i) is user-selectable (see col. 34-47 which recite user selectable splice-in and splice-out point).

Regarding claim 38:

Lyons et al. disclose wherein said splice-in point of step (ii) is user-selectable (see col. 34-47 which recite user selectable splice-in and splice-out point).

Regarding claim 40:

Art Unit: 2666

Lyons et al. disclose wherein said first and second sources include source types selected from a group comprising a storage device, a satellite receiver, a cable receiver, a network, an audio source, a video source and an encoder (In Fig. 2 see the video and audio encoder source, and storage device 220, and col. 3 lines 2-27 which recite the camera and remote audio/video feed, and video disk).

Regarding claim 41:

Lyons et al. disclose wherein said first source and said second source are of a same source type (see col. 11 lines 10-33 which recite joining or switching the end of a bit-stream to the beginning of the same bit-stream clearly anticipate the first source and second source being of a same source type).

Regarding claim 44:

Lyons et al. disclose wherein step (a) is followed by transmitting a portion of the old data stream (see col. 3 lines 41-51 which recite the retimed audio and video streams being multiplexed to produce an output transport stream where the video stream corresponds to the old data stream).

Regarding claim 45:

Lyons et al. disclose wherein wherein step (b) is followed by transmitting the portion of the new data stream (see col. 3 lines 41-51 which recite the retimed audio and video streams

Art Unit: 2666

being multiplexed to produce an output transport stream where the audio stream corresponds to the new data stream).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 25, 28-30, and 32-33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lyons et al. (6,101,195) in view of Hurst, Jr.

Regarding claim 25:

Lyons et al. disclose the method for splicing digitally encoded data streams, including an old data stream and a new data stream (see col. 1 lines 35-48 which recite the method for splicing encoded or compressed bit-stream, where the active live camera data or the end of the bit-stream corresponds to the old data stream and the commercials or beginning of the bit-stream corresponds to the new data stream), comprising: (a) modifying a current timing reference of the new data stream to correspond

Art Unit: 2666

with a splice-out point of the old data stream and a splice-in point of the new data stream, thereby forming a modified new data stream timing reference (see col. 2 lines 16-28 which recite calculating the new timing information using the decoded timing information and information related to the local timing reference whereby the recited calculated timing information corresponds to the modified new data stream timing reference now claimed), and (b) aligning a portion of the new data stream with a portion of the old data stream according to said modified new data stream timing reference, such that a transition from the old data stream to the new data stream, during playback, will be substantially imperceptible (see col. 2 lines 16-28 which recite using the calculated timing reference to retime the data stream; col. 3 lines 28-40 and col. 3 lines 52-62 which recite the use of the new timing information for retiming the old presentation time stamps PTS to accomplish seamless splicing, i.e. transition being imperceptible during playback).

Regarding claim 28:

Lyons et al. disclose wherein said aligning in step (b) sets a start time for transmitting the portion of the new data stream that corresponds with a decoding time for decoding the portion of the old data stream (see col. 1 lines 16-34 which

Art Unit: 2666

recite synchronization of transmitting and decoding to prevent overflow or underflow).

Regarding claim 29:

Lyons et al. disclose wherein said aligning in step (b) sets a start time for a decoder buffer to begin receiving the portion of the new data stream that corresponds with a decoding time for decoding the portion of the old data stream (see col. 1 lines 16-34 which recite synchronization of transmitting and decoding to prevent overflow or underflow).

Regarding claim 30:

Lyons et al. disclose (d) detecting a decoder buffer overflow condition that will result from said splicing, if the data streams are transmitted; and (e) correcting said overflow condition (see col. 11 lines 48-58 which recite regulating flow control to avoid decoder buffer overflow).

For claim 25, Lyon et al. disclose all the subject matter of the claimed invention with the exception of wherein said modified new data stream timing reference further corresponds with a timing gap between a first decoding time for decoding a last frame of the old data stream and a second decoding time for decoding a first frame of the new data stream.

Hurst Jr. from the same or similar fields of endeavor teach that it is known to provide wherein said modified new data

Art Unit: 2666

stream timing reference further corresponds with a timing gap between a first decoding time for decoding a last frame of the old data stream and a second decoding time for decoding a first frame of the new data stream (see col. 18 lines 48-59 which recite the use of a timing gap to maintain alignment of the spliced streams). Thus, it would have been obvious to the person having ordinary skill in the art at the time the invention was made to provide wherein said modified new data stream timing reference further corresponds with a timing gap between a first decoding time for decoding a last frame of the old data stream and a second decoding time for decoding a first frame of the new data stream as taught by Hurst Jr. in the communications method of Lyons et al. The said modified new data stream timing reference further corresponds with a timing gap between a first decoding time for decoding a last frame of the old data stream and a second decoding time for decoding a first frame of the new data stream can be implemented by providing the timing gap between the first decoding time for decoding the last frame of the old data stream and the second decoding time for decoding the first frame of the new data stream of Hurst Jr. in the new data stream timing reference of Lyons et al. The motivation for providing wherein said modified new data stream timing reference further corresponds with a

Art Unit: 2666

timing gap between a first decoding time for decoding a last frame of the old data stream and a second decoding time for decoding a first frame of the new data stream as taught by Hurst, Jr. in the communication method of Lyons et al. being that it provides more efficiency for maintaining alignment of frames without distortion and artifacts during playback.

Allowable Subject Matter

11. Claims 26-27 and 32-33 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Balakrishnan et al. disclose a method for seamless splicing in a video encoder.

Birch discloses bit stream splicer with variable-rate output.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shick C Hom whose telephone number is 571-272-3173. The examiner can

Art Unit: 2666

normally be reached on Monday to Friday with alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 7571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SH

SH

Seema S. Rao
SEEMA S. RAO 10/18/04
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800